Even if no fits → 5-10mg I/V Diaze slowly seems to help.
(potentiates effects & facilitate Inhibitory GABA neurotransmission for seizures)

PARALYSIS:

(1) Acute Paralysis Syndrome: 2° to Continued Depolarization at NMJ.

(2) Intermediate Syndrome: 1-4 days.
often develops after resolution of Acute Cholinergic Syndrome.
Progressive Muscle Weakness (proximal) (ocular, limbs, resp) → failure.
Management: No specific.
Airway Maint & Ventilate
May persist for 2-3 weeks.

(3) OP Induced Delayed Polyneuropathy (OPIDN): After 2-3 weeks. (Sens + Motor)
Degeneration of long myelinated nerve fibers
Flaccid paralysis → Wrist Drop, foot Drop, High stepping gait, paraplegia.
Rx: No specific → Physiotherapy.
Recovery Incomplete

y ——— x

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Rx: → Wear latex/Vinyl Gloves
→ Remove Contaminated clothes, wash skin c soap, water.
→ Irrigate eyes c N/S or R/L.
→ ABC :- Clear airway.
- High flow O_2.
- Intubation if indicated.
→ Take CVC, Artline.
→ $MgSO_4$ → Chance of torsades
→ Gastric lavage & 50gm Activated charcoal } c in 1hour. 200ml water.
→ ICU Admission (Hospitalize for 48hrs).

Inv:
- RBC cholinesterase levels.
- CBC / Leucocytosis Hemoconc.
- ABGs: Acidosis
- ↑BSR, ↓K, ↓Mg.
- CXR: APE.
- ECG: ↑QS, TST, PR, Sinus brady.

Specific: 1) **Atropine**: 2mg IV. Repeat in 10-25min. It reverses ACh-induced bronchospasm, bronchorrhea, brady & hypotension. Cont. c Atropine until Atropinization.
Not more than 4 doses
Skin Dry, Pulse > 70, Dilated pupils

ANTIDOTE 48-72hrs

2) **Pralidoxime**: Reactivate phosphorylated AchE
→ 2g IV over 4mins - stat dose
then Infusion @ 300mg - 500mg /hr. (8mg/kg/hr).

⇒ Take Psychiatry Referral (for case of poisoning)

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⇒ OP POISONING: (Pesticides Poisoning)

OP inactivates AChE (acetylcholinesterase) by phophorylation leading to accumulation of acetylcholine at cholinergic synapses.

Features: 1hour of exposure ± lasts 48-72hrs.

Muscarinic effects + Nicotinic effects.

Cholinergic Overdose (DUMBBELLS)
- Diarhea
- Urination.
- Miosis / Muscle weakness
- Bronchorrhea.
- Bradycardia
- Emesis
- Lacrimation
- Sweating / Salivation.

Effects / Muscarinic / Nicotinic / CNS.

CNS: Anxiety, Emotional lability, Confusion, Ataxia, Seizures, Coma.

Complications:- Generalized flaccid paralysis.
- Torsades de pointes
- pancreatitis
- Hepatic dysfunction.
- Pyrexia.

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Drugs to avoid → - Aspirin (Acetylsalicylic acid) } risk factor for Enceph.
- PCM

* Oral NAC: 140mg/kg solution of 5% NAC (Loading).
Cont. NAC unless INR < 1.4.

King's college Criteria for Liver Transplant:

* paracetamol Induced Liver failure:
  * Arterial pH < 7.3 24hrs after Ingestion.
  OR
  Any of 3 [PT > 100s or INR ≥ 6.
  Cr > 300 μmol/L or 3.4 mg/dl
  III or IV Hepatic Enceph.

* Non paracetamol Induced Liver failure:
  [3 out of 5]
  PT > 100s OR.
  1) Drug Induced.
  2) Age < 10 OR > 40.
  3) > 1wk from jaundice to Enceph.
  4) PT > 50s.
  5) bilirubin ≥ 300 μmol/L.

Enceph: I : Changes in Behavior, Mild confusion, slurred speech
II : Lethargy, Moderate Confusion.
III : Marked confusion, Incoherent speech, sleeping but arousable
IV : Coma, Unresponsive to pain.

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* Management: Rx is effective if started in 8-10 hrs.

(1) Gastric lavage: if > 12g or > 150mg/kg - 1hr
(2) Activated Charcoal (within 1hr). 1g/kg.
(3) I/V NAC → Replenish Hepatic Glutathione
Absorb Toxic Metab.

Provides complete protection against toxicity if given < 10hrs after overdose.

If >8-24hrs & suspicion of large overdose (>7.5g) → start NAC → can be stopped later if plasma levels below treatment.

Dose: 150mg/kg - in 200ml of 5% Dex - 15-60 min.
50mg/kg in 500ml of 5% Dex - 4hrs.
100mg/kg in 1000ml of 5% Dex - 16hrs.

S.E: Rash → Give Chlorphenamine + observe.
Don't stop NAC unless → Anaphylatic (<10%) Reaction - Hypotension, vomiting, wheeze.

Alternative:
Methionine 2.5g oral 4hrly - (4) doses.
↳ less effective than NAC.

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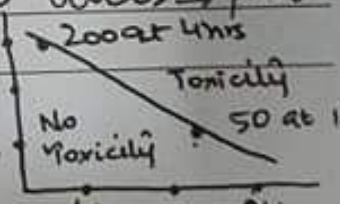
* PARACETAMOL POISONING:

Fatal levels: 12g (24 tablets) or 150mg/kg
(Normal Adults) Malnourished → 75mg/kg fatal

Mechanism:
Mainly by Glucoronidation & Sulfation.
Toxic Metabolite → Detoxification by cellular Glutathione.
In large Doses → Depletion of Glutathione
↓
Reactive O_2 Species.
↓
Hepatic Necrosis.

Features: Early: 0-24hrs.
(May be No symptoms)
or Nausea, Vomiting, ± RUQ pain
Late: 24-72hrs.
Jaundice, Hepatic Enceph.
± AKI.
Coma, Seizures, Hypotension, M. Acidosis

Rx: Serum (4hrs) Acetaminophen levels → plot on Nomogram



(5) - INR
- ALT/LFTs
- UCES
Daily

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Phenytoin → Adverse effects: Hypotension & AV Block. (Not ē fosphenytoin)

If seizures continues:
- Consider Intubation.
- EEG.
- ICU admission.
- ½ Phenobarbital
- If still seizing → General Anesthesia ē Intubation.

Once controlled → Long term Anticonvulsant therapy.

If patient pregnant → Eclampsia
Urgent Gynae Consult → Immediate Delivery.

DDx: -1st presentation of Epilepsy.
- Hypoglycemia.
- Eclampsia.
- Alcohol.
- CNS Lesions or Infections.
- Hypertensive Enceph.
- Non compliance to Rx.

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* Patients c FITS:

Status Epilepticus: Seizure lasting for >30min or repeated seizure c out intervening Consciousness.

Steps: (semiprone)
- Left lateral position (Avoid Aspiration).
- Ensure airway patent → (remove false teeth if poorly fitted) → Insert oral airway – if prolong → Intubate
- ⅓ access – Start hydration & Draw Blood → UCES, LFTS, Serum Ca^{+2}, Glucose, CBC, Serum & Urine Toxicology screen, Anticonv. levels.

Apply O_2.

Start: → ⅓ Lorazepam 2-4mg. Repeat in 10min if no response.
→ ⅓ Thiamine (100-250mg) if alcoholism & malnourish suspected to prevent Wernicke's Encephalopathy
→ ⅓ Dextrose 50g push.

If seizures continues after 30min:
→ ⅓ phenytoin 15-20mg/kg @ 50mg/min
OR ⅓ fosphenytoin (1.5g ⅓ over 10min).

Steroids (10mg ⅓ Dexa) → If Vasculitis / Cerebral Edema suspected.

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June 2017

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		

A new month, a new perspective

* "NIV" (CPAP, BIPAP).

CPAP: Resp. Distress, Pneumonia
Meconeum Aspiration Syndrome.
Bronchiolitis
Tracheomalacia
Diaphragmatic paralysis
OSA.

BIPAP: Central Sleep Apnea, COPD, APE.

CI: Cardiac Arrest
Facial Deformities
Uncasciousness
Risk of Aspiration
Pneumothorax, Hypotension.

Complications:
- Dry Nose
- Epistaxis
- ↓ CO
- Gastric Distension
- Barotrauma.
- Irritation to Skin, Eyes
- Need for Emergent Airway.

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* Bone Marrow Aspiration Needle:
(Sternal Puncture Needle)
Parts: Cannula, Trocar, Adjustable Guard.
Sites: Body of Sternum, Iliac Crest, Tibial tuberosity, Spinous process of lumbar vertebrae.

* Indications:
- Aplastic Anemia
- Megaloblastic "
- Multipre Myeloma.
- Leukemia, Pancytopenia
- Myelofibrosis

* Contraindications:
- Platelet < 40,000
- Local Infection or Sepsis.
- Bleeding Disorders.

⇒ Complications:
- Suction pain.
- Vasovagal attack due to fear or pain
- Bleeding & Localized Hematoma.
- Injury to Underlying Structures (over penetration)
- Infection (Osteomyelitis).

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⇒ "Lumbar Puncture Needle"

Parts: Cannula & cap
Trocar.

* Uses:

» Diagnostic:
- Meningitis
- Encephalitis
- SAH.
- GBS
- MS.

» Therapeutic:
- Intrathecal MTx in ALL.
- Spinal Anesthesia
- CSF Drain in BIH.

* Complications:
- Post LP Headache.
- Infection.
- Bleeding.
- Herniation of Tonsils.
- Persistent CSF leak.
- Injury to local Structures.

* Contraindications:
- Localized Infection.
- ↑ ICP (chance papilledema).
- Bleeding Disorder.

* Causes of ↑ ICP:
- Meningitis / Encephalitis
- Intracial SOL / Hemorrhage / Thrombosis
- Hydrocephalus.
- Hypertensive Encephl.

* ↑ protein in CSF:
- GBS, Block,
- Acoustic Neuroma.
- Froin Syndrome.

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History:

① long standing Diabetes, Complications (CVA in past → Numbness → Autonomic Neuropathy).

② Joint pain.

③ RA..

④ Pain in (R) Upper Quadrant pain.

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200 → 150 → 15min.
400 → 50 → 4hrs
1000 → 100 → 10hrs

Emergencies / Poisonings:

1. Fits?
2. Paracetamol poisoning - Drugs to avoid
   - If é Phenytoin?
   - Kings College Criteria
   - NAC dose.
3. OD poisoning (Cons. pupils, ↑RR)
4. Snake Bite.
   - Inv, Management, Antivenom + Cose, Complications.
5. Status Asthmaticus.
6. PE ✓
7. MI - SK.
8. Narrow & Broad Complex Tachy.
9. DKA.

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ECG:

1. IWMI ē 1st Deg Block - Dx, Inv, Manage.
2. PE.
3. Pericarditis, Findings, Dx, Causes, Rx.
4. AWMI - 6 findings (Acute) ± old inf.
5. Afib.
6. Vent. Bigeminy.
7. CHB - findings - Brady.
   Δ: Dissociation of PP & QRS.
   Irregular Rhythm.
   Different Morphologies
   Rx: DDM.
8. WPW - Narrow comp. Tachy, Delta wave
   PR int. Sha?
   Rx: RFA.
9. Sick Sinus Syndrome.
10. VT, VF.
11. Dextrocardia
12. Brugada.

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(17) Ear D/C, Hemoptysis, Epistaxis, ↑ BP, proteinuria, Hematuria.

(18) Chest pain, ↓ BP, Wenkebach, Δ: ? Clinical Triad?
Essential steps?

(19) 19yr old girl c cramps, fatigue. Recently took diuretics, laxatives to loose weight. K: 2.2.
Differentiate from Renal, Extral renal causes of ↓ K^+.
Clinical Hypokalemia features.
Most common cause of Rcf. Hypo?

(20) 43yrs old female c Evening weakness, Diplopia.
Δ? DDs, Confirm? Rx?

(21) SLE c Lupus Nephritis, Stages?

(22) 35 lady c GTCs, Urinary Incontinence, No fever or / deficits? Δ?

(23) SOB in Musty season. ↓ FEV, FVC Ratio, PEF↓ Dx: Asthma, OLD.
Ratio ↑ - RLD.

(24) Subacute Thyroiditis

(25) Pancreatitis

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Scenarios:

1. DKA
2. Foraii Def.
3. Bloody Diarhea.
4. Sepsis.
5. Thalasemia Intermediate.
6. Dengue / Cerebral Malaria
   (low Hb, low plt, Drowsy, CSF exam, CT (N), Cerebral edema, Meningism signs -ve).
7. Myeloma - Drugs, Favoring points.
8. PE - Duration of Anticoagulation.
   Dose of Heparin.
9. Viral Hemorhagic fever.
10. AGE - Management.
11. Asthma - Rx - Silent Chest.
12. Diarhea + Dehydration → Shock.
13. Epilepsy.
14. MDR TB.
15. Ulcerative Colitis
16. PCOS/- Irregular cycle, weight gain, Cushing Hirsutism, ↑ BP, Obese striae.

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→ "Imp Topics:"

- HTN
- DM
- Asthma
- HIV
- Hep B
- Hep C.
- TB
- Malaria
- Enteric
- Dengue
- PE.
- Epilepsy.
- DKA.
- IBD.
- SLE.

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Counsellings:

1. Palliative Care – Breaking Bad News.
2. Pregnancy – Diabetes.
3. PEP of Influenza.
   IVV, Complications, Prophylaxis.
4. H1N1, Prim + Sec. Prevention.
5. Hep C in Pregnancy.
6. Amputation for Diabetic foot.
7. Needle pricks & Management.
8. Dietary – Celiac, CKD, IBD.
9. Insulin.
10. Epilepsy.
11. Covid News.
12. SLE.
13. Smoking cessation.

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"PAST PAPERS"

Radiology: ① X-Ray RA. Dx, Inv, Rx.

② MRI Spine - Potts - DDx why not Malignancy.
Spinal cord compression.

③ B/L hilar LN - Sarcoidosis - DDx, Inv.

④ CT head - Ring enhancing lesions & Comm. Hydrocep. Tuberculomas Inv, Rx. DDs.

⑤ CXR of IV drug Abuser → Multiple cavity lesions on (R) mid, lower chest along ē soft tissue shadow on (L) mid, lower chest.

⑥ CT Brain plain - Infarcts.
Dx & Rx of Stroke.

⑦ CT Brain ē single hyperdense lesion in (L) parietal lobe ē Surrounding peri-lesional edema.

⑧ APE CXR.

Cont. →

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Indications for Antisnake Venom (ASV):

→ Systemic:
- Spont Bleeding
- 20 WBCT > 20 min.
- Plt < 1 lac.
- Shock
- Arrhythmias
- Abnormal ECG.

→ Neurological: ptosis & paralysis.

→ Renal: ARF, TK.

Myalgias, Rhabdomyolysis

→ Local:
- Swelling in half of bitten limb.
- Rapid extension of swelling.
- Enlarged lymph node draining bitten limb.

ASV should be given in 4 hrs Ideally, effective in 24 hrs

Dose of ASV: Mild cases: 5 vials (50 ml)
Moderate: 5-10 vials
Severe: 10-20 vials.

(500 cc N/S 4-6 vials x start then 2 vials x 6H' (250 cc)

Compartment Syndrome: fasciotomy e⁻ FFPs.

Response to ASV: BP normalize, Bleeding stops. Neurotoxicity improves in 30 min.

In case of Allergic ↓ I/M Adrenaline (0.5 ml).

ASV
Crofab → Viper
Atropine → Neurotoxin.

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Snake Venom Toxins:

→ fibrinolysis.
Bleed → Proteolysin → local edema – blisters, Necrosis
→ Neurotoxin → Inhibit Nerve Impulse → Paralysis
→ Hyp Hemolysin → local, systemic bleed.
DIC → Thromboplastin → Coagulopathy → DIC.
→ Cardiotoxin → Myocardial Depression.
→ Phospholipase → RBC hemolysis.
→ Hyaluronidase → Tissue edema, Cellulitis

Inv: CBC, UCEs, LFTs, CPK, ABGs, ECG, Blood group, CXR, fibrinogen, INR, PT. BT, Whole blood CT, ELISA (Snake Species), Urine DR (↑RBCs)

Management:
- Immobilize pt & bitten part.
Avoid Manipulation → Apply splint/sling.
- Do not apply Tourniquet / ice / Dont wash / Apply cut Incision in near area.
Don't use Aspirin or NSAIDs / Dont suck.
- Give Oxygen & ½ fluids.
- ABC Management, Tetanus Toxoid.

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* | SNAKE BITE:

Snakes → Non Venomous snakes.
↘ Venomous snakes.

Elapidae
- Cobra, Krait, Coral
- Grooved, can't bite through cloth.
(NEUROTOXIC)
Muscle Weakness, paralysis, Convulsions, Ptosis, Dysphagia, Resp. failure (Diaph. paralysis/phrenic nerve) Vomiting Salivation. Hypotension.
Mild to no swelling
Neurotoxins.

Viperidae
viper
- Short thick bodies, long fangs.
Bite through cloth.
(VASCULOTOXIC)
Hemorrhage from external orifices, IC Bleed & Convulsions, Cellulitis, Bleeding gums, Hemolysis due to endothelial destruction
Marked local swelling, Coagulopathy → DIC. Hemolysins, Hypotension.

Hydrophidae
sea Snakes.
→ Generally they don't bite
(MYOTOXIC).
Muscular pain, Myoglobinuria, Rhabdomyolysis, ARF, Resp. paralysis, ↑AST, Hyperkalemia
Sharp prick then painless
Cytotoxins.

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20- اور ایک Tocilizumab نامی دوا ہے جو مہنگی دوا ہے، ایک دن کا انجکشن 1.5 لاکھ روپے تک کا ہے۔

21- امید کرتے ہیں کہ آپ کی بیماری کا یہ دورانیہ بغیر کسی پیچیدگی کے گزر جائے گا۔

22- یہ بیماری پھیپھڑوں کا Pneumonia، دل و دماغ کو بھی متاثر کر سکتی ہے۔

23- بیماری کی شدت زیادہ ہونے پر اس میں Steroids بھی استعمال کئے جاتے ہیں اور خون کو پتلا رکھنے کی دوائیں بھی دی جاتی ہیں اور مصنوعی سانس کی مشین پر بھی ڈالا جا سکتا ہے۔

24- میں جانتی ہوں یہ آپ کے لئے ایک مشکل اور تکلیف دہ وقت ہے۔ لیکن آپ نے ہمت رکھنی ہے۔

25- اپنا خیال رکھنا ہے اور اپنے گھر والوں کی حفاظت کرنی ہے۔

26- کوئی سوال جو آپ کرنا چاہیں گے؟

27- اوکے، بہت شکریہ۔ اللہ حافظ۔

DR. NAILA ASGHAR.

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13 - پانی کا استعمال زیادہ سے زیادہ کرنا ہے۔
14 - بخار کے لیے Panadol لینی ہے۔
15 - قوت مدافعت کے نظام کو بہتر رکھنے کے لیے کچھ وٹامن کی گولیاں ہم آپ کو دیں گے وہ بھی باقاعدگی سے آپ نے لینی ہے۔
16 - Oxygen چیک کرنے کا اعلیٰ (Pulse Oxi) آپ نے لینا ہے، جس بھی وقت آپ سانس کی دشواری محسوس کریں، آپ نے اپنی Saturation (Oxygen کی مقدار) چیک کرنی ہے۔
17 - 92 سے کم ہونے کی صورت میں یا سانس کی دشواری کی صورت میں فوراً ڈاکٹر سے رجوع کرنا ہے۔
18 - اگر خدانخواستہ کسی بھی وقت آپکو سانس میں تکلیف محسوس ہو یا آپ کے سینے کے x-ray میں باقاعدہ تبدیلیاں آتی ہیں، ہمیں آپکو کچھ دوائیاں شروع کرنی پڑیں گی اور ہسپتال میں Oxygen کا انتظام کرنی ہوگی۔
19 - جس میں ایک وائرس کے خلاف کام کرنے والی Remdesivir ہے جو پانچ ہزار تک کا ایک دن کا Injection ہے۔

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کے جسم پر متاثر ہونے کی نوعیت الگ ہے۔

8- کچھ مریض میں اس کی کوئی علامات ظاہر نہیں ہوتی ہیں اور کچھ مریضوں میں بخار، سوکھی کھانسی جیسی علامات اور کچھ میں سونگھنے اور چکھنے جیسی صلاحیت کا ختم ہونا، سانس میں دشواری، جسم میں درد، گلے میں درد شامل ہیں۔

9- یہ وائرس قریبی تعلقات جیسے کسی متاثرہ شخص کے کھانسنے سے، بات کرنے سے، چھینکنے سے یا کوئی بھی عمل جس سے متاثرہ شخص کے سانس کے ذرات سے واسطہ ہو، یہ پھیل سکتا ہے۔

10- اس لئے متاثرہ شخص کو بہت احتیاط کی ضرورت ہے۔ آپ کو کچھ عرصے تک ایک الگ کمرے میں رہنا ہے۔ اپنے کھانے کے برتن الگ کرنے ہیں۔ اپنے استعمال کی ہر شے کو باقی گھر والوں سے دور رکھنا ہے۔

11- باقی گھر والے بھی رش والی جگہوں پر جانے سے پرہیز کریں، ماسک پہن کر گھر سے نکلیں، ہاتھوں کو بار بار 20 سیکنڈ تک پانی سے دھوئیں۔

12- متاثرہ شخص کو اس عرصے میں اپنی غذا کا خاص خیال رکھنا ہے۔

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11/12/20 "Covid Counselling"

By: "Dr. Naila Asghar Rajput"

1- اسلام علیکم میرا نام ڈاکٹر ___ ہے، میں آپ کے علاج معالج ٹیم کا حصہ ہوں. آپکا نام؟

2- میں آج آپکو آپکی بیماری کے بارے میں آگاہی دوں گی. آپ اس گفتگو میں کسی اور رشتے دار کو شامل کرنا چاہیں گے؟

3- آپ اپنی بیماری کے بارے میں کیا جانتے ہیں؟

4- آپ کی رپورٹ کا رزلٹ آگیا ہے. آپکے جسم میں کورونا وائرس کی تشخیص ہوئی ہے.

5- آپ کو کورونا وائرس کے بارے میں کیا جانتے ہیں؟ کیا کسی نے آپکو پہلے آپکی اس رپورٹ سے آگاہ کیا ہے؟

6- جیسا کہ آپ جانتے ہیں یہ ایک ایسا وائرس ہے جس نے دنیا کی سطح پر لاکھوں اور کروڑوں لوگوں کو متاثر کیا ہے. آپکے اپنے ملک میں 4 سے زائد لاکھ لوگ اس بیماری کا شکار ہو چکے ہیں اور ہزاروں افراد انتقال کر گئے ہیں.

7- لیکن یہ ایک ایسا وائرس ہے جس کا ہر مریض

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ہیں جسے آپ عزہ سے پڑھیں گا، اس سے
آپ کو اپنے مراض کو سمجھنے میں مدد
ملے گی۔
16 - آپ کوئی سوال پوچھنا چاہیں گی
مجھ سے؟
ک - امید ہے آپ اپنا بہت خیال
رکھیں گی؟
16 - بہت شکریہ۔ اللہ حافظ۔

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7- یہ بیماری کا وہ حملہ ہے جس میں کسی بھی وقت موت واقع ہو سکتی ہے۔

8- میں جانتی ہوں یہ وقت آپ کے لئے بہت مشکل ہے، یہ چیز آپ کے لئے کتنی تکلیف دہ اور پریشان کن ہے لیکن آپ کو آگاہ کرنا ہر لحاظ سے ضروری ہے۔

9- آپ کی بیماری کے اس دورانیے میں ہم آپ کو درد کی دوائیاں اور ہر ممکن طریقے سے آپ کی ہر تکلیف کو دور کرنے کی کوشش کریں گے۔

10- اپنی زندگی کے اس حصے میں آپ کوشش کیجیے کہ اپنی فیملی اور اپنے پیاروں کے ساتھ بہترین وقت گزاریئے۔

11- آپ کے گھر میں کون کون ہے جو آپ کی دیکھ بھال کر سکتا ہے؟
آپ چاہیں تو میری ملاقات آپ ان سے کروا سکتی ہیں۔

12- اگر آپ خود گاڑی چلا کر آئی ہیں تو میرا مشورہ ہے کہ کچھ دیر ٹھہر کر جائیں تاکہ آپ کو سنبھلنے کا وقت مل سکے۔

13- ہم آپ کو کچھ معلوماتی کتابچہ دے رہے

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DR. NAILA ASGHAR

"Palliative Care Counselling"

1- اسلام وعلیکم، میرا نام ڈاکٹر ..... ہے، آپ کا نام؟ _____

2- _____ صاحب / صاحبہ میں آپ کی بیماری اور اس کے علاج کرنے والی ٹیم کا حصہ ہوں۔ میں آج آپکی بیماری سے متعلق آج آپ سے کچھ بات کرنا چاہوں گی۔

3- کیا آپ کے ساتھ کوئی رشتہ دار ہے؟ آپ اسے ہماری گفتگو میں بلانا چاہیں گے؟

4- _____ صاحبہ، میں جاننا چاہوں گی، آپ اپنی بیماری کے بارے میں کیا جانتی ہیں؟

5- کچھ دنوں پہلے جو آپ کے مزید ٹیسٹ کئے گئے تھے، ان کی رپورٹ آچکی ہیں۔ مجھے بہت افسوس کے ساتھ آپ کو یہ بتانا پڑے گا کہ آپ کی بیماری مزید بڑھنے کے ساتھ آخری اسٹیج کی صورت اختیار کر گئی ہے۔

6- بیماری کے اس حصے میں اس بات کے امکانات کم اور نا ہونے کے برابر ہیں کہ کوئی دوا مزید اس بیماری کے بڑھاؤ کو روک سکتی ہے۔

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→ MDR TB (Resistant to INH, Rif)
↳ Short Duration: 9-12 Months
Long Duration: 18-20 Months.

Intensive phase:
4-6 Months.
④ 2nd line Drugs.
↳ Fluoroquinolones.
- Injectable Kanamycin/Capreomycin.
- Ethionamide / PAS.
- Pyrazinamide/Ethan.

Continuation phase.
5 Months
- Bedaquiline
- Levofloxacin.
- Ethambutol
- Clofazimine
- PZA.

- XDR TB (Resistant to INH, Rifampicin, floroquinolest ! in 2nd line Drugs).

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(10) Acute Gastroenteritis & ARF & Hypovolumeic Shock:

Diarrhea

- Acute: ≥3 episodes partially formed or watery (<14 days)
- Persistent: Acute lasting for >14 days
- Dysentery: Infectious Bloody Diarrhea.
- Travellers: Starting during or shortly after travel.

Causes

- Viral
- Bacterial
- Parasites.

Diagnosis

CBC, UCES, Stool D/R, Stool C/S, Stool PCR/ Enzyme Immunoassay

Rx:

→ Fluids: 10-15ml/kg Crystalloid (IV)
Target BP: SBP > 90, HR < 100
UOP: > 0.5ml/kg/hr.

→ ORS: 200-400ml after each episode.

→ Abx: In severe Dehydration only.

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Inv: Nasal Swab for H1N1 (confirmed by PCR) — <5yrs or >65 / Pregnant / Immunocompromised / Comorbids.

Rx: - Bedrest
- Antivirals + Antiallergics (Amantadine)
  - Oseltamivir – 75mg x BD. (Tamiflu) → (5days).
  - Peramivir (Rapivab)
  - Zanamivir – 10mg x BD. (Relenza)

Complications: → Pneumonia
→ Worsening of Asthma & plus Heart Disease.
Reye Syndrome.
→ Neurological signs (Encephalitis)
→ Respiratory failure
→ Sinusitis, otitis Media.

Post Exposure Prophylaxis:

10 days → oseltamivir Tamiflu.
Dose. 75mg x BD.
(Weight dependent Dose).

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⑨ SWINE (H1N1) FLU – / INFLUENZA VIRUS:

H1N1 - Influenza A Virus Subtype H1N1.
Family: Orthomyxoviridae.
Glycoproteine < H - Haemagglutinin.
N - Neuroaminidase.

2009 → Swine flu pandamic
(Direct Contact ē Pigs)
Transmission: Cough / sneeze (Resp. Droplets).
Incubation period: 2-7 days.
Symptoms: Cough, fever, Sorethroat, Stuffy or Runny Nose, Bodyaches, Headache, Chills, fatigue.

Influenza Vaccine:

Inactivated Influenza
OR Influenzative Attenuated (LA)
OR Influenza Recombinant

(Intranasal / IM).
Give 1 dose Annually in b/w 2 7-49 years of age (All above Six Months or older).

* LA should not used in pts ē allergic Hx or Immunocompromised.

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August 2017

Mon	Tue	Wed	Thu	Fri	Sat	Sun
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

A new month, a new perspective

CXR findings in card:

- Ground Glass Opacities to Consolidation in B/L peripheral, middle & Lower zones.
- Pleural Effusion (less Common).
- Bilateral hilar Lymphadenopathy (less Common).
- Bronchovascular Thickening
- Crazy Paving Appearance
- Traction Bronchiectasis.

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D-Dimers, LDH, Covid 19 PCR (Naso or Oropharyngeal). Covid 19 Antibodies - IgG, IgM.

Complications: ARDS → ARF (Resp. failure)
Acute liver Injury,
Acute Cardiac Insult,
AKI, Ceptic Shock, DIC,
Venous Thromboembolism.
(Hypoxia & Inflammation leads to ↑ Inf. cytokines & coag. pathway activation)

Virchow's Triad:
Endothelial Injury
Stasis
Hypercoagulable state.

Preventation & Treatment:
- Washing hands - 20sec.
- Avoid touching face, eyes, nose, mouth.
- Stay atleast 6 feet (2m)
- Use disinfectants on surfaces.
- Avoid Crowding.
- Wear Mask in public places.

Rx:
- Steroids
- Antivirals (Remdesivir).
- Combination of HCQ & Azithromax (Anti-Inf)
- Tocilizumab (Novel Monoclonal Antibody inhibits IL-6) 4-8mg/kg - 60min I/V Infusion 4 weekly

- Remdesivir: 200mg (loading) then 100mg once daily for 5-10days.
- Undefined Role for Plasma from Recovered patients.

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USA, India, Brazil. Ref - 89 - 460, 672 9474.

Incubation period: On average 5-6 days.
Can as long as 14 days.

Transmission: Direct, Indirect or close contact (Highly Infective) (Infected Secretions).
↳ Saliva, Resp. Droplets.
→ Cough / Sneeze / talk / sings

* Most common Symptoms:
→ fever, Dry Cough, Tiredness.

- Less Common:
* Aches, pains, Sorethroat, Diarrhea, Conjunctivitis, Headache, loss of Smell or taste, rash on skin.

* Serious Symptoms:
SOB, Chest pain, Loss of Speech or Movement

Risk factors for Disease:
→ Adults > 65 or older, living in Nursing Homes
→ Underlying disease - COPD, Asthma, DM, Obesity, Liver or heart issue, CKD, Immunocompromised.

Δ: CBC, Metabolic profile, CXR, Inflammatory Markers → PCT, Ferritin, CRP, IL-6,

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(8) COVID-19 PNEUMONIA:

Virus: SARS-COV-2 (Severe Acute Respiratory Syndrome Coronavirus-2)

Family: Coronaviridae.

Genus: Betacoronavirus.

First case of Covid 19 was reported in late November 2019. A large population of the initial cases in late DEC, 19 had a direct link to Huanan Wholesale Seafood Market in Wuhan City, China where seafood, wild & farmed animal species were sold. All available evidence suggests that SARS-COV 2 has a natural animal origin. SARS-COV 2 virus most probably has its ecological reservoir in Bats.

The virus effected Pakistan on 26/2/20 when (2) cases recorded in Khi, one just returned from Iran, another person in Islamabad.

77,862,204
Dea: 1,712,010
Rec: 59,753,689

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SLICC Criteria for SLE:

(4) or more / 11.
Atleast one Clinical + one Immunologic
OR.
Lupus Nephritis as sole + ANA or Anti DS DNA.

Clinical:
- (Skin): 1) Malar Rash (Acute) / Discoid Rash (Chronic); 2) Oral Ulcers; 3) Alopecia / Photosens
- MSK → 5) Non-Erosive Arthritis
- Cardio pulmo → 6) Serositis
- 7) Renal proteinuria or RBC casts.
- Neurologic → 8) Seizures or Psychosis
- Heam: 9) Hemolytic Anemia or Leucopenia or Lymphopenia or ↓ Plts.

Immunological:
- Serology: 10) ANA +ve
- 11) Anti DS DNA, +ve / Anti Sm / Anti PLA.

Rx:
- Avoid sun exposure
- Analgesics > skin & joints
- NSAIDs
- HCQ → skin, joint.
- Belimumab < Joints, skin, Serositis
- Acute flares: High dose steroids
- Lupus: steroids + Mycophenolate. ½ steroids + ½ cyclophosphan.
- Maintenance: Oral Steroids + Immuno suppressants.

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Treatment:

1) Vivax
2) Ovale
3) Malariae

→ Primaquine. → 0.5mg/kg for 14 days.
→ 600mg Chloroquine → 300mg 6hrs / 300mg 24hrs - 300mg 24hrs later

Falciparum:

Uncomplicated:

Artemisinin based chemo OR Quinine

↓ Co artemether (Artemether + Lumefantrine) 4 tab - 0, 8, 24, 36, 48, 60 hrs (3 days)

↓ Quinine 600mg 3 times daily for 7 days + Doxy OR Clinda OR Atovaquone.

Complicated:

½ artesunate 2.4mg/kg → 0, 12, 24 hrs. Then once daily for 7 days.

↓ Switch to Oral 2mg/kg. (17-18 mg/kg)

OR

Quinine. (20mg/kg) in 4hrs

Resistance:

- Mefloquine or
- Doxy or Malarone → High
- Chloroquine → Low Resistance

or Proguanil.

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⑥ MALARIA:

	Incubation:	fever
Plasmodium falciparum:	8-25 days	No pattern
" Vivax:	8-25 days	Benign Tertian (48hrs)
Ovale:	8-25 days	Benign Tertian (48hrs)
Malariae: (GN & Nephrotic)	15-30 days	→ Quartan (72hrs)

Features:

Falciparum → Malaise, Headache, Vomiting, Jaundice, Hepatosplenomegaly, Anemia, Thrombocytopenia

Severe:
- Cerebral.
↓ Consciousness
Confusions,
Convulsions.
↳ Coma / Death.

Others: Severe Anemia, DIC, ARDS, Hypoglycemia, M. Acidosis, Gastro

Black Water fever:
- passage of Dark urine.
- Hemolysis.

Δ: ① Giemsa stained blood films → Thick: / Blood stages; Thin: Species, parasitic load.

② ICT - Rapid stick test: Optimal. Parasight F.

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Rx:

- Partial seizures & partial ē 2° Generalization → 1st line: Carbamazepine
  - 2nd: Lamotrigine. Sodium Valproate
- Primary GTCS → Sodium Valproate. then Lamotrigine/Topiramate.
- Absence → Ethosuximide. then Sodium Valproate.
- Myoclonic → Sodium Valproate. then Clonazepam.

* Start ē one first line drug at low dose, gradually ↑ dose. Make sure Compliance.
  ↓
  2nd 1st line drug — gradually withdraw 1st.
  ↓
  2nd line drug + 1st line at Max dose.
  ↓
  Alternative 2nd line → Reconsider Δ.

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(5) EPILEPSY:

- Recurrent, Unprovoked seizures due to a chronic underlying process.
- Inhibitory Neurotransmitters (GABA) prevent seizures
- Excitatory NTs (Ach, Glutamate) provoke seiz.

Causes: V I T A M I N G

- V: Vascular → Stroke, AVM
- I: Infection
- T: Trauma
- A: Auto Immune
- M: Metabolic → ↓Na, ↓Glucose, ↓Ca, Hypoxia
- I: Idiopathic
- N: Neoplasm
- G: Genetic, Developmental

Triggers:
- Sleep Deprived.
- Alcohol.
- Flickering lights (TV, Screens)
- Injections
- Loud Noises, Music, Hot baths.

Inv: - UCES, BSR, LFTs, Ca, Mg, EEG, CXR, ESR, CRP, HIV, CSF, MRI, CT Scan.

Indications of Brain Imaging in Epilepsy:

1) Epilepsy after age of 20yrs.
2) Focal features clinically.
3) EEG → Focal seizure source.
4) Control of seizures → difficult-
   - Deteriorating

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Dx:

→ Protein Electrophoresis (SPEP) : < Serum: Ig > 3
                                  < Urine: BJ protein > 6.
→ ↑ ESR, CRP
→ ↓ Anionic Gap.
→ Beta2 Microglobulin. > Disease Severity (useful in prognosis)
→ ↑ LDH.
→ ↑↑ Blood BUN : Cre Ratio.
→ ↑ Total protein, (↓↓) Albumin.

→ Bone Marrow Bx:
- (↑ plasma cells > 10%.) (Intracytop).
- Russel Bodies. (PAS +ve Inclusions).
- Dutcher Bodies (PAS +ve Intranuclear).

- Skeletal Survey → lytic lesions.

Criteria:
2 out of 3:
1) Serum and/or Urinary paraproteins.
2) ↑ Malignant plasma cells on BM.
3) Skeletal lytic lesions.

Rx: High Dose Chemo
- Age < 70: < HSCT.
- Age ≥ 70: < Melphalan + Pred + Thalidomide OR lenalidomid

Adjuvant:
Bone → Bisphophonates.
Anemia → EPO, Tx.
Infections → Abx.
Renal → Hydration.
ARF → HDx.

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(4) "MULTIPLE MYELOMA":

→ Plasma cell Neoplasm (B-cells).
→ Most common Monoclonal Gammopathy.
→ Types of Monoclonal Ig or paraproteins: (Symptomatic)
IgG: 55%.
IgA: 25%.
Light chainonly: 22%.

Features:

* **Skeletal**
- Lytic bone Tumors
- Bone pain, ↑Ca.
- Pathological fractures

* **Hematological**
- Anemia
- Rouleaux form.
- ↑↑ ESR >100
- Coagulopathy, ↑BT.

* **Renal**
- BJ proteins
- Nephro-calcinosis
- Renal failure.

* **Amyloidosis**
- Secretion of Ig light chains
↓
Nephrotic Syndrome

* **Infections**
- Most common cause of death in MM.
- ↓ Normal Ig.
- Strept, S. Aureus, E. Coli.

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Atleast one high risk OR
Atleast two moderate
c AKI or lactate >2 → HIGH RISK.

Labs: CBC, UCEs, Cultures, Serial ABGIS, VBGIS for lactate, CRP, Clotting profile, Pus c/s - wound titles → cultures, CXR.

Atleast One Moderate to high risk → Moderate to High Risk.

Rx:

Mainstay → Antibiotics (Broad spectrum c in 1hr).

Start Acyclovir → Suspected Meningitis

0.9 NS → Fluids → 30ml/kg → over 30-60min (1-2L) c
Boluses of Crystalloids.

Pass fleets for I/O

→ Oxygen → SaO_2 94-98%

→ Critical care R/V → Possible Inotropes / Ventilation / HDx.
(SBP < 90, RR > 30, ↓GCS, ↑ Lactate).

CVP Measurement ↓ Hypovolemia

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③ "SEPSIS":

Life threatening Organ Dysfunction caused by a dysregulated host response, to Infection.

Septic Shock: sepsis + { Lactate > 2 e⁻ fluid Resuscitation / Vasopressors need to maintain MAP ≥ 65.

→ Moderate to High Risk

* Altered Mental Status Report or acute deterioration in functional status.
* Resp Rate 21-24.
* SBP: 91-100mmHg.
* HR 91-130 / Arrhythmia
* UOP: Nil for 12-18hrs / 0.5-1.0ml/kg/hr.
* Local Signs of Infection ↑ Redness, Swelling, Discharge.
* Rigors / Temp < 36°C
* Impaired Immunity.
* Recent Surgery / Trauma / procedure.

High Risk.

Objective evidence of Altered status

* RR > 24.
* SBP < 90 or >40 from baseline
* HR > 130.
* UOP: Nil for 18hrs < 0.5ml/kg/hr.
* Mottled, ashen or cyanosed skin. Non Blanching Rash.

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Inv:
- CBC < Hb level, Platelets, TLC
- UCEs < AKF: ↓ Na, ↑ K, ↓ HCO_3.
- Stool D/R, Stool C/S.
- PT/INR.
- Albumin, LFTs } CLD.
- Viral Serologies.
- FLPs.
- ESR, CRP → IBD
- pANCA / cANCA.
- Abd. CXR → IBD features.
- Colonoscopy ± Endo.

Rx: Treat the cause.
* U/C → Oral ASA + local steroid ± Oral Steroids
* Shigella → Nutrition, zinc, Abx (cipro, Azithro).
* E. Coli → Supportive. Dont give Abx (↑ risk of HUS)
* Salmonella → Supportive. Severe Disease → Abx.
* Campylo → Invasive Cases → Abx – Macrolide, Doxy
* Yersinia → Aminoglycosides, co-trimaxole.
* Ischemic Colitis → Abx + fluids ± Surgery.
* CLD → CLD Management.

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(2) Approach to Bloody Diarrhea:

Hx: - No., Amount, Mixed or separate, before passing stool or after defecation. Something coming out of Anus? Wt loss? A/S of Tenesmus or Abd. pain.

DDs:

R/O PUD.
? Relation of food intake.
Drug Induced
- Antiplatelet / Anticoagulant.

R/O CLD
? Jaundice
? Ascites
? ALOC
? Alcohol, Hep.
? Blood Tx
? Hx of Endo or colon.

R/O IBD
? Wt. loss
? Fever
? Mouth sores
? Desmg Manifest.

R/O Malignancy
? Wt loss
? Anorexia
? Previous Hx.

Radiation Colitis
Hx.

R/O Ischemic Colitis
? Hypercholesterolemia
? DM, HTN.
? H/O SVT/Arrhythmia/Afib.
? Bloating
? fever.

Bacterial Inf.
- E. Coli
- Salmonella.
- Shigella.
- Campylobacter
- Yersinia

R/O Coagulation Disorders.
? Bleeding from other sites.

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① FOLATE DEFICIENCY ANEMIA:

Source: Green veges, Animal proteins.

Cause of Def: 1) ↓ Intake < Malnourished. Goat Milk (No folate)
2) ↑ Demand < Chronic Hemolytic Anemia, Pregnancy
3) Malignancy
4) Dialysis
5) Malabsorption < Celiac, Psoriasis
6) Drugs: 5FU, MTx, Phenytoin, TMP-SMX.

Labs:
- ↓ Serum Folate
- ↓ RBC folate → Best Indicator for stores
- ⇑ Homocysteine.
- Normal Urine Methyl malonic acid (↑ in Vit B12 Anemia).
- ↓ Retic count.
- ↑ LDH, Indirect Bilirubin Levels.

Rx: Oral folic acid 5mg daily (3 weeks) followed by Maintenance 5mg x 1 weekly.

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